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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,093	03/24/2004	Quintin T. Phillips	10007395-3	7655

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EXAMINER

MOUTTET, BLAISE L

ART UNIT	PAPER NUMBER
	2853

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

SA

Office Action Summary	Application No.	Applicant(s)
	10/809,093	PHILLIPS, QUINTIN T.
	Examiner	Art Unit
	Blaise L Mouttet	2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 March 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10, 20-22 and 25-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10, 20-22 and 25-52 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 March 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/26/04.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: CLAIMS FROM 10/28272

DETAILED ACTION

Preliminary Amendment

1. The preliminary amendment filed March 24, 2004 has been entered.

Priority

2. This application has been filed as a continuation of Application No. 10/218272, filed August 13, 2002. An amendment to the specification including a specific reference to the parent application should be included as required by 35 USC 120.

Claim Objections

3. Claims 46-48 are objected to because in claim 46, line 4 "a memory device" should read --the memory device-- in accordance with the antecedent basis.

Claims 47 and 48 are objected to because in claim 47 "filing" should read -- filling--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 7-10, 34, 37-42, 46 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto et al. EP 985 537.

Matsumoto et al. discloses, regarding claim 1, a method of printing cartridge maintenance comprising:

reading printing history data (actual number of reproductions) for printing cartridge (10) and a predetermined usage threshold (possible number of reproductions) stored in a memory device (32) on the print cartridge (page 4, lines 16-19, page 4, lines 38-41), and

refilling at least a portion of the printing cartridge if usage of the cartridge, as determined from the printing history data (actual number of reproductions) does not exceed the predetermined threshold (possible number of reproductions) (page 4, lines 26-37).

Regarding claim 2, a current level of consumable in the print cartridge is determined as part of the refilling determination procedure (page 4, lines 25-28, page 5, lines 4-7).

Regarding claim 7, the memory is reset (figure 10, step I) after printing history is read (figure 10, step B).

Regarding claim 8, refill is prevented (figure 10, step J) if the usage determined from the printing history exceeds the predetermined threshold (figure 10, step C).

Regarding claim 9, the print cartridge is reconditioned (figure 10, steps G-I).

Regarding claim 10, the reconditioning includes cleaning of a collection chamber of the print cartridge (figure 11, steps D-I).

Matsumoto et al. discloses, regarding claim 34, a method of refilling a printing cartridge comprising the steps of:

providing a refill station (figure 9) having a cartridge receptacle (67) and a delivery port (fluidic interface from charge means 66) configured to engage the cartridge (10) when the cartridge is placed in the cartridge receptacle (page 6, lines 4-18);

reading usage information (number of reproductions) stored on the cartridge when said cartridge when the cartridge (10) is in the cartridge receptacle (67) (page 5, lines 53-58);

and replenishing a substance in the cartridge through the delivery port if the usage information indicates the cartridge has not been used beyond a useful operational life (predetermined number of reproductions) of the cartridge (figure 10, step H).

Regarding claim 37, a user interface on the printing device in which the cartridge is installed indicates whether or not the cartridge may be refilled when the substance is exhausted from the cartridge but the useful life is not expended (figure 6, step O).

Regarding claim 38, the usage of the cartridge is automatically tracked and recorded to the cartridge as it is used (page 6, lines 19-23).

Regarding claim 39, the useful operational life (possible number of reproductions), written during manufacture (i.e. fixed data), is read from the cartridge (10) (page 4, lines 16-19, page 4, lines 38-41).

Regarding claim 40, the printing cartridge is reconditioned (figure 10, steps G-I).

Regarding claim 41, the reconditioning includes cleaning of a collection chamber of the print cartridge (figure 11, steps D-I).

Matsumoto et al. discloses, regarding claim 42, a printing cartridge refilling apparatus (figure 9) comprising:

- a supply of consumable substance (ink charge means 66);
- an interface (67) configured for engagement with the cartridge;
- a delivery port through which consumable substance is ejected into a printing cartridge from the supply (page 6, lines 12-18); and
- a computer (control device 60) programmed to read printing cartridge history data from the printing cartridge through the interface (page 5, lines 53-54).

Matsumoto et al. discloses, regarding claim 46, a method of making a printing cartridge comprising:

- disposing a memory device (32) on the print cartridge (10) for storing print history data (figure 1A, page 2, lines 44-48); and
- storing a predetermined usage threshold (possible number of reproductions) in the memory device on the printing cartridge such that a remaining useful life **can be** determined by comparing the predetermined usage threshold (possible number of reproductions) and printing history data (actual number of reproductions) stored on the memory device (page 4, lines 38-40, the remaining useful life is capable of being determined by taking the difference between the possible and actual number of reproductions).

Regarding claim 47, a container of the cartridge is filled with a consumable (figure 10, step H).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 6, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. EP 985 537 A1 in view of Reihl et al. US 6,366,742.

Matsumoto et al. discloses the limitations of claims 1 and 34 as explained in the 35 USC 102 rejection above.

Matsumoto et al. fails to disclose recording the amount of consumable added to the printing cartridge in the memory device or reading customer information recorded on the cartridge.

Reihl et al. teaches filling operations for a printing cartridge (2) which includes a memory device (13) that communicates with a printer (1) and a filling station (3) wherein the amount of consumable substance added is stored in the memory (column 7, lines 42-48) and customer identification information is recorded in the memory (column 7, lines 24-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to record the amount of consumable added to the printing cartridge in the

memory device and read customer information recorded on the cartridge of Matsumoto et al. as taught by Reihl et al.

The motivation for doing so would have been that the recording of such data facilitates the monitoring of the consumable expiration data and the administration (inventory, etc.) of the containers in circulation as described in column 8, lines 1-4 of Reihl et al.

6. Claims 43-45 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. EP 985 537 A1 in view of Ahn US 5,898,450.

Matsumoto et al. discloses, regarding claim 43, a printing cartridge comprising:
a consumable substance container (figure 1B);
a memory device (32) for containing printing history data (page 3, lines 36-46);
a refilling port (23) in fluid communication with the consumable substance container, the refilling port selectively operational according to predetermined printing history data parameters (as indicated by figure 10, step H).

Regarding claim 44, the consumable substance container includes multiple containers for different ink colors (page 3, lines 52-53).

Regarding claim 45, a controller (60) selectively controls the refilling of the multiple containers in response to the history data (page 5, lines 46-50).

Matsumoto et al. discloses the subject matter of claim 46 as described in the 35 USC 102 rejection above.

Matsumoto et al. fails to disclose, regarding claims 43 and 48, that a collection chamber for collecting the consumable substance discharged/spilled from the container is included as part of the print cartridge.

Ahn discloses a collection chamber (63, figure 2) for collecting consumable substance discharged/spilled from an ink container included as part of a print cartridge (column 4, lines 58-65).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to include a collection chamber as taught by Ahn in the print cartridge of Matsumoto et al.

The motivation for doing so would have been to prevent overflow/spilling during a refill operation as taught by column 4, lines 58-65 of Ahn.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

7. Claims 49-52 of the current application are identical to claims 49-52 of US Patent application 10/218,272 (Notice of Allowance mailed June 23, 2004).

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 3-7, 9, 10, 20-22 and 25-33 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5-7, 9, 10, 20-22 and 25-32 of copending Application No. 10/218,272 (Notice of Allowance mailed June 23, 2004). Although the conflicting claims are not identical, they are not patentably distinct from each other because independent claims 1 and 20 of application 10/218,272 encompasses all of the limitations of independent claims 1 and 20 of the current application, dependent claims 5-7, 9, 10, 21, 22 and 25-32 of application 10/218,272 directly correspond to the respective dependent claims of the current application and dependent claims 3, 4 and 33 of the current application corresponds to limitations contained in independent claims 1 and 20 of application 10/218,272.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Blaise Mouttet who may be reached at telephone number (571) 272-2150. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier, Art Unit 2853, can be reached at (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Blaise Mouttet July 9, 2004

BM 7/9/2004

LAMSON NGUYEN
PRIMARY EXAMINER

7/11/04

IN THE CLAIMS:

Please amend the claims as follows:

1. (previously presented) A method of printing cartridge maintenance comprising:
reading printing history data for said printing cartridge and a predetermined usage threshold stored in a memory device on said printing cartridge,
determining a remaining useful life of a printing cartridge based on said printing history data for said cartridge and said predetermined usage threshold, and
refilling at least a portion of said printing cartridge if usage of said cartridge, as determined from said printing history data, does not exceed said predetermined threshold.

2-4. (cancelled)

5. (previously presented) The method of claim 1, further comprising recording any amount of consumable substance added to the printing cartridge in said memory device.

6. (previously presented) The method of claim 5, further comprising reading customer identification information recorded on said printing cartridge.

7. (previously presented) The method of claim 1, further comprising replacing or resetting said memory device after reading said printing history data.

8. (previously presented) The method of claim 1, further comprising preventing the refill of said printing cartridge if said remaining useful life is less than said predetermined threshold.

9. (previously presented) The method of claim 1, further comprising reconditioning said printing cartridge.

10. (previously presented) The method of claim 9, wherein said reconditioning comprises emptying or cleaning a collection chamber of said printing cartridge.

11. (previously presented) A refilling system for printing cartridges including a computerized filling station comprising:

a refill receptacle configured to receive a printing cartridge having a memory device attached thereto, said receptacle comprising an interface for interfacing with said memory device;

a supply of material which is consumed during operation of said printing cartridge, said supply being connected to said refill receptacle; and

a controller for reading both printing history data and a useful life value that are recorded on said memory device on said printing cartridge, wherein said controller selectively refills at least a portion of said printing cartridge in response to a comparison of said printing history data and said useful life value.

12-15. (cancelled).

16. (previously presented) The refilling system of claim 11, wherein said printing cartridge is an inkjet printer cartridge.
17. (previously presented) The refilling system of claim 11, wherein said printing cartridge is a toner cartridge.
18. (previously presented) The refilling system of claim 11, further comprising electronic instructions to determine an amount of said consumable material contained in said printing cartridge.
19. (previously presented) The refilling system of claim 18, further comprising a consumable substance gauge.
20. (currently amended) A device refilling system comprising:
 - a printing cartridge for containing a supply of consumable substance, wherein a gauge is disposed in said supply of a consumable substance and configured to output an indication of a quantity of said consumable substance remaining in said printing cartridge;
 - a memory device incorporated with said cartridge for recording a printing history of said cartridge; and
 - a refilling station for reading information recorded on said memory device, receiving said indication from said gauge and selectively refilling said cartridge;

wherein said refilling station includes a computer for reading said printing history of said memory device and for determining a remaining useful life of the cartridge; and wherein said computer compares said printing history to one or more predetermined useful life metrics.

21. (original) The system of claim 20, wherein said memory device comprises a non-volatile memory chip readable by a computer.

22. (original) The system of claim 21, wherein said memory device comprises an RFID having an antenna for communication with a transmitter of a printing device or said refilling station.

23-24. (cancelled)

25. (currently amended) The system of claim [[23]] 20, wherein said refilling station prevents refilling of said cartridge if said computer determines said cartridge has no remaining useful life.

26. (currently amended) The system of claim [[23]] 20, wherein said refilling station further comprises a supply of consumable substance.

27. (original) The system of claim 26, wherein said filling station further comprises a consumable substance delivery port for refilling said cartridge.

28. (original) The system of claim 27, wherein said cartridge further comprises a consumable substance refill port configured for engagement with said substance delivery port for receiving consumable substance from said refilling station.

29. (original) The system of claim 28, wherein said cartridge further comprises an inkjet cartridge.

30. (original) The system of claim 28, wherein said cartridge further comprises a toner cartridge.

31. (original) The system of claim 30, wherein said toner cartridge is a laser printer toner cartridge or a copier toner cartridge.

32. (original) The system of claim 20, wherein said printing history comprises one or more of: printing cartridge use time, quantity of consumable substance delivered, number of pages produced, number of pixels printed, number of cleaning cycles performed, number of calibrations cycles performed, types of jobs printed, age of printing cartridge from manufacture date; and cartridge time above a specified temperature.

33-48. (canceled)

49. (previously presented) A refilling system for printing cartridges including a computerized filling station comprising:

means for receiving and refilling a printing cartridge having a memory device attached thereto;

a supply of material which is consumed during operation of said printing cartridge, said supply being connected to said means for receiving and refilling;

means for reading and comparing both printing history data and a useful life value that are recorded on said memory device on said printing cartridge; and

means for selectively refilling at least a portion of said printing cartridge with material from said supply in response to a comparison of said printing history data and said useful life value.

50. (previously presented) The refilling system of claim 49, wherein said printing cartridge is an inkjet printer cartridge.

51. (previously presented) The refilling system of claim 49, wherein said printing cartridge is a toner cartridge.

52. (previously presented) The refilling system of claim 49, further comprising means for cleaning a collection chamber of a printing cartridge, wherein said collection chamber collects material spilled in a printing cartridge.